**Employer Offers, Private Coverage, and the Tax Subsidy
for Health Insurance: 1987 and 1996**

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Abstract: Economists have long been interested in the effect of tax-based subsidies on private health insurance coverage. We examine this relationship using pooled data from the 1987 National Medical Expenditure Survey and the 1996 Medical Expenditure Panel Survey. Our main tax price elasticity estimates for employer offers and for private coverage are near the mid-point of the existing literature. However, these estimates may mask substantial differences in tax-price responsiveness across subsets of workers. Our more disaggregated analysis reveals tax price responsiveness to be significantly above average for low-income workers, workers with low health risks, and workers in small firms – precisely those groups whose continued participation in employment-related risk pooling is of greatest policy concern. In addition, we present family-level elasticities that allow for joint decision-making in two-worker families.

Keywords: Employer health insurance; Tax preference; Fringe benefits

JEL Classification: I18; H24; J32

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I. Introduction

Health economists have long been interested in the tax subsidy for employment-related health insurance.[1] Under current law, health plan contributions by employers and in some cases employees are exempt from payroll and personal income taxation. Federal and state tax revenue losses associated with health coverage for current employees are estimated to have been approximately $80 billion to $90 billion during the mid-1990s (Burman and Williams, 1994; Gruber and Poterba, 1996; Selden and Moeller, 2000).[2] Critics of this tax preference have long noted that it may encourage excessively generous coverage, and linking health coverage to employment may distort labor market outcomes such as participation, job choice, hiring, and mobility.[3] There are also equity issues with the tax subsidy, because its incidence varies with marginal tax rates and with the level of excludable contributions (see, for instance, Selden and Moeller, 2000, and references therein).

These issues notwithstanding, the tax preference for employment-related health coverage may also play a constructive social role simply by encouraging private coverage. Within the civilian noninstitutionalized population, the percentage of persons under age 65 with private coverage at any point during the year has fallen from 79.4 percent in 1977, to 77.8 percent in

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[1]The classic reference is Feldstein (1973). Other related studies include Taylor and Wilensky (1983), Holmer (1984), Pauly (1986), Chernick, Holmer, and Weinberg (1987), Feldman *et al.* (1989), Feldman and Dowd (1991), Newhouse (1992), and Gruber and Poterba (1996).

[2]These estimates exclude tax losses for retiree health benefits.

[3]See, for instance, Pauly (1986), Monheit and Cooper (1994), and Buchmueller (1995).

1987 and 74.2 percent in 1996.[4] The growing population of persons without private coverage is

divided between those with public coverage at some point during the year (11.9 percent of the

under-65 population in 1996) and those remaining uninsured throughout the year (14.0 percent of

the under-65 population in 1996) (Kirby et al., 2001). Both outcomes entail significant social

costs. Public coverage uses scarce public funds and may raise efficiency concerns regarding the

mix, financing, and provision of care. Persons without any coverage face lower access, lower

utilization, and greater risk of high health expense burdens, while also contributing to the

problem of uncompensated care.   The challenge (and opportunity) in restructuring the tax

subsidy is not only to reduce incentives for excessive medical spending and to improve the

subsidy's incidence, but also to accomplish these objectives while simultaneously strengthening

incentives for private health insurance coverage among those groups with low and declining

coverage rates.

    A fundamental question surrounding any change of the tax treatment of health coverage is

how employers and employees would respond to changes in the effective subsidy rate. In this

paper, we examine the "tax price elasticity" of employer offers and private coverage using data

on workers and their families from the 1987 National Medical Expenditure Survey and the 1996

Medical Expenditure Panel Survey. We draw on recent empirical contributions by Royalty

(2000), Gruber and Lettau (2000), and Gruber (2001) to present instrumental variables estimates

of the relationship between the simulated tax price and the prevalence of employer offers and

private coverage. We present results from a worker-level analysis and from a family-level

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[4] Estimates for 1977 are from Taylor and Banthin (1994). Estimates for 1987 and 1996 are from Kirby et al. (2001).

analysis that allows for joint decision-making in two-worker families. In addition, we present tax

price effects for subsets of workers and their families defined by income, health risk, and

establishment size.

The next section presents a brief review of the literature and an overview of our approach.

The third section describes the data and presents details regarding methodology. Section four

presents our main results. Section five presents results from adding interaction terms to the

model and from the family-level analyses. Section six concludes the paper.

II. Overview

Tax policy can influence health insurance coverage in a great number of ways. It may

affect which employers offer coverage and the mix of employees who are attracted to offering

establishments. It may also affect the generosity of employer contributions to offered plans, the

mix of plans employers choose to offer, and even employee selections among offered plans.

In view of this complexity, it is perhaps not surprising that there are nearly as many

definitions of insurance demand elasticity as there are insurance demand elasticity papers.[5] Some

studies focus on the price elasticity of demand for coverage that is incremental to a reference

plan or conditional on being offered a particular choice among plans. Some focus on the impact

of price on offers of coverage, while others focus on take-up conditional on eligibility for offered

coverage. In some studies, the price of insurance is deemed to be inclusive of employer

contributions, the assumption being that workers bear the burden of such contributions in the

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[5] Much of the early literature on the price elasticity of insurance demand is reviewed in
Pauly (1986). See also Gruber and Lettau (2000).

form of lower cash wages. Other studies focus on employee contributions, treating employer

contributions as given. One of the largest impediments to drawing comparisons across studies is

that insurance prices can vary along many dimensions, including loading factors, local medical

care prices, group risk levels, and the extent of tax subsidization.

In this paper we focus on the relationship between the tax price of insurance and (a)

eligibility for employment-related offers of private coverage ("offers") and (b) private health

insurance coverage from all sources ("private coverage"). We focus on tax price effects not only

because the tax price provides a relatively exogenous source of insurance price variation, but

more importantly because the tax price can be directly controlled through public policy. We

include all sources of private coverage, because we believe this approach best addresses the

larger policy question of whether tax policy can influence private coverage rates inclusive of all

potential substitution across private insurance sources.

Following Gruber and Poterba (1996), we define

$$Tax \ Price \ \equiv \ \frac{1 \ - \ \tau_{SS} \ - \ \tau_M \ - \ \tau_F \ - \ \tau_{ST}}{1 \ + \ \tau_{SS} \ + \ \tau_M}$$

τ_{SS} = marginal Social Security employee payroll tax rate
τ_M = marginal Medicare employee payroll tax rate
τ_F = marginal federal income tax rate
τ_{ST} = marginal state income tax rate

Intuitively, the higher the marginal tax rate, the lower the effective price of health insurance in

terms of disposable (after-tax) cash income foregone per dollar spent on health insurance

premiums. The terms τ_{SS} and τ_M enter this tax expression through both the numerator and the

denominator due to the fact that Social Security and Medicare payroll taxes are paid by both employees and employers.[6]

Our analysis builds closely on three recent analyses: Royalty (2000), Gruber and Lettau (2000), and Gruber (2001). Royalty and Gruber both examine household survey data from the Current Population Surveys (CPS). Royalty uses state-level variation in marginal tax rates to examine the subsidy responsiveness of employer offers in 1988 and 1993. Gruber examines data from 1988-1999, relying primarily on changes in tax progressivity across states and across time to identify the subsidy responsiveness of employer offers and private coverage. Comparably-defined tax price offer elasticities are -0.738 in Royalty and -0.648 in Gruber.[7] For private coverage (from all sources), Gruber finds a tax price elasticity of -0.577.[8] In contrast to these household-based studies, Gruber and Lettau examine employer data from the Employment Compensation Surveys for 1983-93, estimating the tax price elasticity of employer offers to be -0.383.

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[6] As shown in Gruber and Poterba, if T is total cost to the employer, W is pre-tax cash wages, and P is the employer's premium contribution, then we have $T = (1 + \tau_{SS} + \tau_M)W + P$, because employer premium contributions are exempt from employer payroll taxation. The employee's after tax income Y^D is $Y^D = (1 - \tau_{SS} - \tau_M - \tau_F - \tau_{ST})W$. Taking derivatives with respect to Y^D and P, holding T constant, the tax price is obtained as $-dY^D/dP$.

[7] To compute the offer elasticity from Royalty's estimates, we use the fact that a one point change in federal or state marginal tax rates translates into a tax price change of $-0.01/(1+\tau_{SS}+\tau_M)$. Thus, $e = [\%\Delta \text{ offers}]/[\%\Delta \text{ tax price}] = [\beta/y]/[(-0.01/(1+\tau_{SS}+\tau_M))/x]$, where $\beta=0.009$ is the coefficient estimate from Royalty's offer equation, y is Royalty's sample frequency for employer offers (0.83), and x is the tax price (equal to 0.636 if we use Royalty's mean combined marginal income tax rate with our sample means for Social Security and Medicare marginal tax rates).

[8]To compute this elasticity for all private coverage sources, we combine Gruber's results for employer coverage, other group coverage, and nongroup coverage: e = [%Δ all private coverage]/[%Δ tax price] = [(-.696-0.080+0.008)/(0.638+0.178+0.042)]/[0.01/0.645] = -0.577.

Each of these studies has strengths and weaknesses. Gruber and Lettau use data on a sample of jobs for each establishment, enabling them to address the group choice nature of the decision to offer coverage.[9] However, they only observe the characteristics of jobs and not actual employees, so that incomes, family relationships, and personal characteristics must all be imputed from an outside data source (they use the CPS). Moreover, their use of employer data prevents them from examining the effect of tax prices on coverage, an outcome of central importance in many policy contexts. In contrast, the CPS data used by Royalty and Gruber provide detailed information on workers and their coverage; however, household-based survey data provide no insights regarding group decision-making within firms. Unfortunately, no single data source provides accurate socioeconomic information for a sample of workers and their families drawn at the employer level. Until such data become available, it remains useful to compare tax price elasticities estimated using a range of methods and data sources.

III. Data and Methods

Data for our analysis are drawn from the 1987 National Medical Expenditure Survey (NMES, as described in Edwards and Berlin, 1989, and Emmons and Hill, 1994) and the 1996 Medical Expenditure Panel Survey (MEPS, as described in Cohen et al., 1996, and Cohen, 1997). We use data on full-time, non-self employed workers age 18 or over and their families.[10] Throughout the paper we define families to comprise adults plus related individuals who would

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[9] See Goldstein and Pauly (1976).

[10] Full-time workers are defined as those working over 35 hours per week at their current main job.

typically be eligible for coverage as dependents under a family plan. Typically, this comprises

adults, their spouses, and their dependent children. Sample means in each year are provided for a

selection of dependent and independent variables in Table 1.

We estimate linear probability models for employer offers and private coverage,

regressing each outcome on a wide range of control variables and the tax price defined above.

We rely on linear probability models in part due to the likelihood of measurement error in the

simulated tax price. Although IV methods can be used in discrete choice models, they yield

inconsistent estimates if the underlying motivation is to correct for measurement error.[11] In

addition to estimating models for employer offers and private coverage, we follow Royalty

(2000) in examining worker eligibility for the firm's retirement plan and for paid sick leave.

Insofar as retirement benefits are tax-preferred, we would expect tax price effects similar to those

we find for health insurance offers. Insofar as paid sick leave is not tax-preferred, there should

be no corresponding effect.

Data on employment-related fringe benefits in 1987 were gathered through the Health

Insurance Provider Survey (HIPS), which was administered to employers of NMES participants

as of the end of 1987.[12] Employment-related benefits in MEPS also pertain to jobs held as of the

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[11] See, for instance, Hsiao (1989) or Bound, Brown, and Mathiowetz (2001) and references therein.

[12] Partially by design and partially as a result of non-response, the 1987 employer follow-back survey was administered only for a subset of NMES participants. The design of HIPS and the development of post-stratified weights to support nationally-representative estimates is described in detail in Emmons and Hill (1994). For comparability across models, our main estimates are constructed using data with valid responses for all dependent variables (thereby limiting us to the HIPS sub-sample in 1987). However, we obtained very similar results for our private coverage equation when using the full NMES sample.

end of the calendar year, with benefits in this case being reported by household respondents. For both years, data on employment-related benefits pertain only to current main jobs in order to exclude retiree coverage (and a small number of other current positions that offer benefits). In both years our offer variable captures whether the employee is both offered and eligible for coverage.

Table 1 shows that the percentage of full-time employees who were offered (and eligible for) coverage through their current main jobs was 82.9 percent in both 1987 and 1996.[13] Royalty's comparably-defined offer rate is also 83 percent (based on CPS data averaged over 1988 and 1993). These offer frequencies are lower than those obtained from employer surveys. Gruber and Lettau find that 93 percent of non-federal workers worked in establishments that offered health insurance (based on Employee Compensation Survey data averaged over the period 1983-1993), and the MEPS Insurance Component (IC) survey of employers finds that 85.7 percent of all private sector employees in 1997 worked for offering employers.[14] For comparison, when we exclude public sector employees our offer rate is only 81.4 percent. These differences likely stem from some combination of (a) employer surveys capturing offers irrespective of eligibility, and (b) under-reporting in household surveys.

Turning to the other fringe benefits, our frequencies for employer-sponsored pension plan eligibility are 69 percent in 1987 and 64.5 percent in 1996, versus the 62 percent frequency for

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[13] These offer rates are larger than those reported in Cooper and Schone (1997) primarily because we exclude part-time workers.

[14] *1997 Employer-Sponsored Health Insurance Data.Private-Sector Data by Firm Size, Industry Group, Ownership, Age of Firm, and Other Characteristics.* July 2001. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsdata/ic/1997/index197.htm

1988 and 1993 reported by Royalty using the CPS. For paid sick leave, our frequencies are 80.4 percent in 1987 and 72.2 percent in 1996 for all employees (or 77.0 and 71.3 percent for private sector employees). In contrast, Royalty's CPS frequency for all full-time workers is somewhat lower at 68 percent (averaged over 1988 and 1993), as are the Employee Benefit Survey's estimates of 70 percent and 65 percent for full-time employees in medium and large private establishments in 1986 and 1993, respectively (U.S. Bureau of Labor Statistics, 2001).

Our measure of private health insurance coverage in both 1987 and 1996 pertains to coverage as of the end of the calendar year. Private coverage was reported by household respondents during the first few months of 1988 and 1997, respectively. In both years, our measure excludes policies that cover only single diagnoses or that provide limited coverage for a single type of service. Perhaps because both NMES and MEPS are health-focused surveys with relatively short recall periods and numerous follow-up questions, these data are widely regarded as providing more accurate national estimates of health insurance coverage than the Current Population Survey.[15]

It is important to emphasize that our private coverage equation is not a "take-up" equation *per se*. Our private coverage indicator includes coverage not only from one's current main job, but also dependent coverage on a spouse's policy, as well as private coverage from any other source (including the individual market). Moreover, we estimate this equation for the full sample, rather than estimating coverage conditional on having an offer. We believe this approach best addresses the larger policy question of whether tax policy can influence private coverage rates inclusive of all potential substitution across private insurance sources.

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[15]See, for instance, Monheit (1994) and Winter and Moyer (1999).

Taxes on income were simulated using the Internet version of TAXSIM 4.0 (Feenberg and Coutts, 1993) in conjunction with tax-related data from NMES and MEPS. Both datasets provide detailed annual income flows by source.[16] They also provide data enabling us to compute the main components of itemizable expenditures.[17] Marginal income tax rates from TAXSIM are computed as the average increase in taxes per dollar computed over a $1,000 increment to wage income. We augment these TAXSIM income tax simulations with Social Security and Medicare tax rates simulated using our in-house tax simulation program MEDTAX (Moeller, 1994).

As shown in Table 1, the mean combined federal and state income tax rate is 25.3 percent in 1987 and 25.2 percent in 1996. This is similar to Royalty's comparable estimate of 24.9 percent for 1988 and 1993. Our mean tax price is 0.637 for 1987 and 0.629 for 1996. This is close to Gruber's tax price of 0.645 for 1988 through 1999, but below Gruber and Lettau's average and median tax prices of 0.741 and 0.744, respectively.

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[16]NMES and MEPS both provide information on calendar year income flows from a wide range of sources, including wages, tips, commissions, bonuses, business and farm income, interest and dividend income, and income from rent, royalties, trusts, capital gains, pensions, alimony, child support, Social Security, and welfare. To ensure the highest degree of compatibility across data sources, we re-edited the NMES income measures to conform more closely to editing rules applied to the MEPS income data (Agency for Healthcare Research and Quality, 2001).

[17]NMES provides mortgage payment information for homeowners, and we apply market interest rates to the mortgage balance information provided in MEPS to develop a similar measure for 1996. In both years, we simulated property taxes using national average assessment and tax rates applied to primary residence values. We computed medical expenditure amounts in excess of each year's adjusted gross income (AGI) threshold. Somewhat more arbitrarily, we added a miscellaneous deductible expense for each filing unit equal to one half of one percent of AGI. The final component of our itemizable expenditures is state income taxes, which are computed internally within TAXSIM (along with whether the filing unit actually is deemed to itemize).

We follow Royalty, Gruber and Lettau, and Gruber in instrumenting the tax price. There are two main motivations for using instrumental variables. First, marginal tax rates may reflect worker-specific characteristics that are correlated with offer or coverage rates and that have not otherwise been adequately included in our regression equations. Second, there may be errors in our simulation of marginal tax rates.

To construct our instrument, we divide our sample into 80 potential "cells" defined by income decile, year, marital status, and home ownership. We then simulate 51 tax prices for each observation in each cell (one for each state and the District of Columbia). Finally, we use as our instrument the mean tax price in each worker's cell and state. The result is an instrument similar to that used by Gruber and Lettau and by Gruber. By constructing the instrument at the decile*state level, the main source of identification in our models is the variation in tax progressivity across states and across time. The underlying hypothesis is that, everything else equal, states with more (less) progressive tax structures will exhibit greater (lesser) differences across income with respect to offer and private coverage rates. In constructing our tax price instrument we use marital status and home ownership to help increase the explanatory power of our instrument (although we obtain very similar results from instruments based solely on income deciles).

We include a full set of decile, marital status, home ownership, state, and year dummy variables to reduce the possibility that our instrument is correlated with the error term in our regressions. In addition, we interact the decile dummy variables with the year effect to help control for the possibility that changes between 1987 and 1996 (such as the general rise in medical care prices) may have differentially affected low-income persons. In the absence of

decile*year interactions, such changes might be captured in the tax price effect given that we observe a modest decline on average between 1987 and 1996 in the progressivity of U.S. income taxes.[18] We also interact the state and year effects to control for any changes within states over time.

We conducted a number of tests to examine our instrumental variables (IV) specification. The instrument's coefficient in the first-stage regression is 0.974, with a (survey-corrected) t-statistic of 13.756. The instrument's partial-R^2 is 0.016 (the overall R^2 for the first-stage equation is 0.540). Based on both a Hausman test and the Davidson-MacKinnon test (Davidson and MacKinnon, 1993, p. 238), OLS estimates depart significantly from consistency in the private coverage equation. There is no corresponding evidence of inconsistency for the OLS offer equation. However, we focus on IV estimates for all models, in part due to our policy focus on private coverage. (OLS estimates are presented in Appendix A.)

Other explanatory variables contained in our regressions include categorical controls for age, education, marital status, the presence of dependent children in the worker's family, race, ethnicity, residence in a Metropolitan Statistical Area (a measure of urbanization), unionization, establishment size, establishment sector (public sector; private sector industry, mining, and construction; and private sector services), and whether the worker is employed by a multi-establishment firm. We also include a measure of health risk. To produce this measure, we

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[18] For persons with family incomes under $30,000 in 1996 dollars, the tax price fell slightly between 1987 and 1996 from 0.699 to 0.668; whereas for workers in families with incomes over $30,000 the tax price held constant, rising only from 0.607 to 0.609. During this period, private coverage fell among workers in lower income families (from 74.0 percent to 68.7 percent) and held constant among workers in higher income families (falling only from 95.9 percent to 95.3 percent).

estimate a two-part model for total medical expenditures in each year (1987 and 1996),

estimating separate models for children through age 17, adults through age 64, and seniors age

65 and older. Explanatory variables include age, race, sex, chronic condition indicators, self-

reported health status indicators, disability status indicators, region dummies, income, and health

insurance coverage. Using these models, we construct predicted expenditures that vary only with

age, race, sex, chronic conditions, self-reported health status, and disability status (holding

region, income, and health coverage at their sample averages). We define high-risk workers to

be those whose family-level totals for predicted expenditure are ranked in the top quintile of

families with full-time workers (using a separate ranking each year).

IV. Results

Table 2 presents our worker-level IV linear probability model estimates. All models are

estimated using sample weights so as to provide consistent estimates of population coefficients.

Standard error estimates (in parentheses) have been adjusted to account for the complex design

of the NMES and MEPS samples and for the possibility of intra-family correlation within

married couples with two full-time workers.

The first column of results in Table 2 presents our employer offer equation, in which the

marginal tax price effect is estimated to be -0.728. In other words, a one percentage point

increase in the tax price of insurance is estimated to decrease offer rates on average by about

seven tenths of a percentage point. This estimate translates into a tax-price offer elasticity of

-0.556 (in brackets in Table 2). This is well within the range of previous estimates. Our

elasticity is smaller (in absolute value) than comparably-defined tax-price elasticities from

Royalty (-0.734) and Gruber (-0.648) and larger than Gruber and Lettau's elasticity estimate of -0.383 (from their model with decile*year interactions).

The second and third columns in Table 3 present parallel results for retirement benefits and paid sick leave. As observed by Royalty, if the tax subsidy effect is being correctly estimated in the offer equation, then one would expect to estimate a similar effect for other tax-preferred benefits (such as retirement plans). In contrast, there should be little or no tax subsidy effect for non-tax preferred benefits (such as paid sick leave) absent cross-price substitution effects. In Royalty's analysis, examining other employment-related benefits helps to guard against the possibility that marginal tax rate effect estimates are biased from the omission of state characteristics that are correlated with both offers and state tax policy. In our analysis, we control for such state-level effects directly by including state fixed effects. Nevertheless, comparing estimates across subsidized and unsubsidized benefits can help us determine whether the tax rate coefficient in our health insurance offer equation is capturing the effect of unwanted state or state*decile characteristics that cannot be controlled for by simply adding state and decile dummy variables. Comparing tax price coefficients across the columns of Table 2, we see similar tax price effects for offers and retirement plans, versus a much smaller tax price effect for paid sick leave, in both cases helping to confirm our offer equation specification.

The final column of Table 2 provides our worker-level linear probability model for private coverage. The point estimate for the tax price coefficient is -0.804, which translates into a tax-price coverage elasticity of -0.582. This is virtually indistinguishable from Gruber's private coverage elasticity of -0.577.

Adjusting Cash Wages for Employer Premium Contributions

Insofar as employees bear the burden of employer premium contributions, the cash wages we observe (and associated tax rate simulations) might be endogenous to receiving an offer of employment-related coverage. The question of how employer contribution burdens are distributed among employees has long been of interest to economists (see, for instance, Sheiner, 1999, and Levy, 1999). To examine for this potential misspecification, we increased reported cash wages by an amount equal to actual employer premium contributions (net of employer payroll taxes and prorated for the months coverage was actually held). We recognize that higher-risk employees may in fact bear disproportionate burdens in the form of lower wages, and some burdens might be borne by workers who are offered but do not take-up coverage. However, our approach has the advantage of capturing employer contribution variation across firms without entailing stronger assumptions regarding within-firm incidence. Having adjusted cash wage incomes in this manner, we then re-simulated marginal tax rates and re-computed instruments (using re-defined income deciles).

These adjustments lower the tax price for our pooled sample only slightly, from 0.633 to 0.629. The tax price effect for offers declines somewhat to -0.410 (s.e. 0.332); however, this difference is not statistically significant. Moreover, the tax price effect for private coverage remains relatively unchanged at -0.768 (s.e. 0.317). Given that our primary focus is on private coverage, and in view of the uncertainty surrounding the true incidence of employer contributions, we decided to follow previous researchers in focusing on estimates obtained using unadjusted cash wages.

Controlling for Local Price Differences

Variations in local price levels may affect health insurance decisions by altering the

purchasing power of nominal incomes. Variations in medical care prices may play an even

larger role by influencing both insurance premiums and the risks faced by families.

Unfortunately, there is only limited information regarding differences in price levels across

geographic areas. In an effort to assess the sensitivity of our estimates to the omission of price

information from our regressions, we experimented with including the MSA-level all goods and

services price index constructed by the American Chamber of Commerce Research Association

(ACCRA) along with the corresponding ACCRA price index for health care.[19] Neither index had

a statistically significant effect on either employer offers or private coverage – at least in part

because our state*year fixed effects may already control for a great deal of price variation. More

importantly, the tax price coefficient estimates were relatively unaffected: -0.756 (s.e.=0.328) in

the employer offer equation and -0.821 (s.e.=0.310) in the private coverage regression.

V. Extensions: Interaction Effects and Family-Level Results

Interaction Effects

The tax price effects presented in Table 2 represent average responses for our nationally-

representative population of full-time workers. It is reasonable to expect, however, that there

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[19] The ACCRA indexes were obtained from U.S. Bureau of the Census (1998, Table B-6).
For some MSAs, indices are available for 1996, but not 1987. Whenever possible, we filled such
gaps using the MSA's 1996 value adjusted for 1987 to 1996 changes in other MSAs in the same
state. MSAs (and non-MSA areas) missing ACCRA data in both years were assigned the
minimum ACCRA index within their Census region.

would be variation around this mean effect, with some subsets of workers exhibiting greater or

lesser responsiveness to changes in the tax subsidy for employment-related coverage. In

particular, we would expect workers with high incomes and those with high health risks to be

relatively unaffected by the marginal subsidy for employment-related coverage. Such workers

are likely to have very high offer and coverage rates regardless of tax subsidies – their insurance

choices being motivated by other factors such as access to quality care and asset protection. As a

corollary, we would expect to find above-average responsiveness among lower-income workers

and among those with lower health risks.

The top panel of Table 3 presents estimated tax price coefficients and associated

elasticities obtained by interacting the tax price with income dummy variables for low, middle,

and high family incomes (and interacting the tax price instrument in the same way).[20]   We find a

monotonically decreasing tax price effect for both offers and coverage, although only in our

coverage model is there a significant difference between income groups.[21]

The next panel of Table 3 presents results from interacting the high-health risk indicator

with the tax price. Our main estimates in Table 2 show that being in a high-risk family is only

weakly related in our data to offers and coverage.[22]   However, interacting this variable with the

tax price reveals that private coverage subsidy responsiveness varies significantly with health

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[20] In all cases main effect dummy variables are added to the model to avoid confounding
main and interaction effects.

[21] Holmer (1984) finds a similar pattern of subsidy responsiveness diminishing with
income. Also, Gabel et al. (2001) find that take-up rates are most sensitive to employee
contributions in firms with the greatest proportion of low-paying jobs.

[22] For an analysis of health risk and the market for employment-related health insurance,
see Buchmueller (1995).

risk. Workers in high-risk families have a significantly lower tax price effect (-0.566) than do other workers (-0.832), as is consistent with our hypothesis that workers in high-risk households would be gaining coverage (or not) based on factors other than the marginal subsidy on employment-related coverage.

The bottom panel of Table 3 presents our estimates of marginal tax rate effects by firm size. Referring back to Table 2, it is clear that firm size (and whether the firm has multiple establishments) is one of the most important predictor of both having an offer and having private coverage. This is consistent with many previous findings that firm size is positively correlated with both offers and coverage – and this is precisely what one would expect given the greater ability of large firms to pool risks and the lower per employee costs in such firms for underwriting and for health plan administration more generally. Given the important role played by firm size in explaining offers and coverage, it is also of interest to examine whether subsidy responsiveness varies along this dimension as well.

To produce the estimates in the bottom panel of Table 3, we interact the tax price with an indicator for workers with current main jobs in single-establishment firms with fewer than 50 employees. In view of the consistently high levels of offers and private coverage among workers in large firms, firms with multiple establishments, and the public sector, it is not surprising that we find smaller tax-price effects for these workers than we find for workers in smaller, single-location, private firms. Once again, however, the difference is statistically significant only for private coverage.

Family-Level Analysis

The results presented above are at the worker level. Although we correct these results for the possibility of intra-family correlation in the error term, it may be more appropriate to model the outcomes of married couples jointly, at the family level. Married workers may make simultaneous decisions regarding employment-related benefits, whereby if one spouse is eligible (ineligible) for coverage then the other spouse may be more (less) likely to pursue employment in a firm that does not offer coverage.[23] For this reason, a couple's tax price may be more strongly correlated with the couple having one (or more) offers between them than with each spouse's own eligibility for employer-related coverage. Similarly, offers and health insurance coverage in two-worker families may depend on whether *either* spouse is employed at a large establishment, rather than whether *each* spouse is himself/herself employed at such an establishment.

In Table 4 we present family-level regressions for families with at least one full-time, non-self employed worker. The family-level offer variable indicates whether at least one adult in the family was eligible for employment-related coverage through his/her current main job. The family-level private coverage variable indicates whether all family members had private coverage (from any source). For families with 2 full-time workers, establishment characteristics are taken from the spouse whose establishment had the highest (unconditional) offer frequency. Thus, we use the larger of the two workers' establishment sizes (grouping multi-establishment firms with single-location firms having over 500 employees). Similarly, the family-level economic sector variables indicate whether either spouse was employed in government, private industry, or private services, in that order. Remaining person-level control variables (such as

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[23] See, for instance, Dranove, Spier, and Baker (2000).

indicators for education, age, race, and sex) pertain to characteristics of the full-time worker in the family with the largest personal income.

The top panel of Table 4 provides our tax price coefficient estimate for all families with full-time working adults. In the equation for whether any adult has an offer of coverage, the tax price coefficient is -0.727, translating into an elasticity of -0.527. This is very close to the tax price effect from our worker-level offer regression. The estimated effect of the tax price on all family members having private coverage is -1.076, which is larger than the tax price effect from our worker-level regression (albeit not significantly so). The implied family coverage elasticity is -0.830.

Perhaps even more intriguing are the family-level interaction results presented in the subsequent panels of Table 4. We find significantly higher family coverage responsiveness for lower income families, with families under $20,000 in 1996 dollars exhibiting a very large tax price elasticity of -2.788. In contrast, we do not find large family-level differences in subsidy responsiveness across health risk. With respect to employment characteristics, families whose members work in private-sector firms with over 50 employees, multi-establishment private firms, or the public sector exhibit significantly lower subsidy responsiveness for offers than families whose members do not work for these traditional providers of employment-related coverage. Somewhat surprisingly, this difference is only weakly mirrored in our private coverage regression.

The final two rows of Table 4 present results for two policy-relevant subsets of families. Compared to the average family, we would expect families with children to base their insurance decisions more heavily on factors that are unrelated to the tax subsidy. Conversely, we would

expect single-person families to be at the opposite end of the spectrum, exhibiting relatively high levels of subsidy responsiveness. Our point estimates for both offers and private coverage are consistent with these hypotheses.

VI. Conclusions

In this paper we use pooled NMES and MEPS data to examine the relationship between the tax price of coverage and employer offers and private coverage. Our focus is on public subsidies for employment-related group coverage. Such subsidies represent the public sector's primary means for encouraging participation in the nation's most widespread form of private insurance. Our results should not be extrapolated to form predictions regarding the impact that *non-group* coverage subsidies might have on either group or non-group coverage. During the period of our analysis, such subsidies were available only for self-employed persons, who we have excluded from our sample of workers.

Overall, we find tax price elasticity estimates for employer offers and for private coverage that are well within the range of recent estimates. The similarity of our estimates to previous findings provides important independent confirmation for those earlier results. This consistency also works in the opposite direction, increasing the confidence we place on our findings from extending the basic model to examine subsets of workers and their families.

Perhaps our most noteworthy finding is that estimates of average tax price elasticity may obscure substantial variation across subsets of the population. Indeed, our results provide evidence that subsidy responsiveness may be greater than previously believed among three groups of great policy interest. First, there is concern among policymakers that the decline in

private employment-related coverage is most acute among small private establishments. Most state health insurance reforms have been targeted at this segment of the market for precisely this reason. Our finding of above-average subsidy responsiveness among workers in these firms suggests that subsidies targeted at small firms may offer at least a partial solution.

A second area of concern is that the existing tax subsidy is regressive in its incidence and is not targeted at the lower end of the income distribution, where private coverage rates are the lowest. Our results contribute to this debate by providing evidence that private insurance coverage among low income workers and their families is more responsive than average to changes in the tax subsidy.

Third, a more general concern is that low rates of participation by healthy workers in employment-related coverage may contribute to rising premiums and the unraveling of employment-related risk pooling. Here again, we find evidence suggesting that private coverage among low-risk workers and their families is more responsive than average to changes in the tax subsidy. This suggests that the tax price of coverage may play a important role in encouraging low-risk workers to participate in private risk pooling.

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Table 1: Sample Means, Full-Time Workers, 1987 and 1996

Variable	Sample Mean or Frequency (Standard Error)	
	1987	1996
Covered by Private Insurance	88.8% (0.6)	86.1% (0.6)
Eligible for Private Health Coverage at Current Main Job	82.9% (0.7)	82.9% (0.6)
Eligible for Retirement Plan at Current Main Job	69.0% (0.8)	64.5% (0.8)
Has Paid Sick Leave at Current Main Job	80.4% (0.8)	72.2% (0.8)
Marginal Tax Rates		
Employee's Social Security and Medicare Marginal Tax Rate	6.7% (0.03)	7.3% (0.02)
Federal Marginal Tax Rate	21.2% (0.2)	20.8 (0.2)
State Marginal Tax Rate	4.1% (0.2)	4.3% (0.2)
Tax Price	0.637 (0.002)	0.629 (0.002)
Age (in Years)	37.5 (0.2)	39.5 (0.2)
Male	58.8% (0.6)	56.7% (0.7)
Nonwhite	16.4% (0.9)	16.1% (0.8)
Hispanic	7.4% (0.7)	9.3% (0.5)

Variable	Sample Mean or Frequency (Standard Error)	
	1987	1996
Married	64.2%	62.4%
	(0.8)	(0.9)
Number of Dependent Children	0.87	0.86
	(0.02)	(0.02)
Works in Establishment with Fewer than 50 Employees	37.3%	44.8%
	(0.9)	(0.8)
Works in Establishment with More than 1 Location	68.0%	69.5%
	(0.8)	(0.7)
Union Member	18.0%	16.4%
	(0.7)	(0.6)
Family Income[a] (1996 U.S. Dollars)	$49,597	$49,160
	(724)	(819)
Home Ownership	59.0%	57.7%
	(1.0)	(1.0)
Resides in Metropolitan Statistical Area	75.3%	82.2%
	(1.4)	(1.1)
Number of Observations	6281	5899

[a] Family income includes only income of worker and spouse (if any).

Table 2: Worker-Level IV Linear Probability Models for Coverage and Employee Benefits

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Tax Price	-0.728**	-0.728*	-0.243	-0.804***
	(0.310)	(0.372)	(0.335)	(0.309)
	[-0.556]	[-0.691]	[-0.202]	[-0.582]
High Family Health Risk	-0.006	0.006	0.001	0.009
	(0.009)	(0.012)	(0.011)	(0.007)
Age 26-35	0.061***	0.047***	0.020	0.027**
	(0.015)	(0.015)	(0.015)	(0.014)
Age 36-45	0.062***	0.063***	0.015	0.034**
	(0.015)	(0.016)	(0.016)	(0.014)
Age 46-55	0.088***	0.089***	0.034**	0.046***
	(0.014)	(0.015)	(0.017)	(0.014)
Age over 55	0.058***	0.051***	0.023	0.066***
	(0.018)	(0.020)	(0.021)	(0.015)
Male	-0.007	-0.002	-0.040***	-0.028***
	(0.007)	(0.009)	(0.008)	(0.006)
Black	-0.023**	0.010	0.013	-0.048***
	(0.011)	(0.014)	(0.012)	(0.011)
Hispanic	-0.070***	-0.034**	-0.020	-0.084***
	(0.014)	(0.015)	(0.015)	(0.013)
Education: 12 Years	0.062***	0.076***	0.089***	0.057***
	(0.013)	(0.013)	(0.015)	(0.012)
Education: 13-16 Years	0.082***	0.104***	0.163***	0.084***
	(0.013)	(0.013)	(0.014)	(0.012)

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Education: over 16 Years	0.104*** (0.014)	0.171*** (0.017)	0.186*** (0.017)	0.086*** (0.014)
Married[a]	0.016 (0.014)	0.031** (0.017)	0.033** (0.015)	0.057*** (0.014)
Has Dependent Children	0.002 (0.004)	0.001 (0.005)	-0.001 (0.005)	-0.005 (0.004)
Home Owner	0.042*** (0.010)	0.055*** (0.012)	0.037*** (0.011)	0.059*** (0.009)
Resides in Metropolitan Statistical Area	0.001 (0.010)	-0.018 (0.012)	0.013 (0.013)	0.016 (0.010)
Income Decile 2[b]	0.087*** (0.028)	0.007 (0.031)	0.062* (0.033)	0.083*** (0.028)
Income Decile 3[b]	0.183*** (0.029)	0.074** (0.031)	0.101*** (0.032)	0.186*** (0.027)
Income Decile 4[b]	0.214*** (0.032)	0.117*** (0.032)	0.155*** (0.034)	0.229*** (0.029)
Income Decile 5[b]	0.220*** (0.032)	0.139*** (0.033)	0.190*** (0.035)	0.247*** (0.030)
Income Decile 6[b]	0.210*** (0.037)	0.156*** (0.041)	0.197*** (0.043)	0.238*** (0.035)
Income Decile 7[b]	0.205*** (0.048)	0.132** (0.054)	0.198*** (0.054)	0.210*** (0.044)
Income Decile 8[b]	0.184*** (0.056)	0.128** (0.063)	0.207*** (0.061)	0.198*** (0.052)

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Income Decile 9[b]	0.145[**] (0.062)	0.087 (0.069)	0.170[**] (0.068)	0.172[***] (0.058)
Income Decile 10[b]	0.152[**] (0.062)	0.113 (0.072)	0.179[***] (0.068)	0.177[***] (0.058)
Single-Estab. Firm with 11 to 20 Emp.	0.205[***] (0.029)	0.145[***] (0.028)	0.084[***] (0.029)	0.098[***] (0.023)
Single-Estab. Firm with 21 to 50 Emp.	0.339[***] (0.022)	0.227[***] (0.023)	0.144[***] (0.026)	0.140[***] (0.018)
Single-Estab. Firm with 51 to 200 Emp.	0.374[***] (0.023)	0.341[***] (0.021)	0.196[***] (0.024)	0.174[***] (0.019)
Single-Estab. Firm with over 200 Emp.	0.397[***] (0.020)	0.509[***] (0.021)	0.306[***] (0.022)	0.204[***] (0.016)
Multi-Establishment Firm[c]	0.365[***] (0.017)	0.411[***] (0.015)	0.255[***] (0.018)	0.160[***] (0.015)
Private Sector: Manufacturing[d]	-0.054[***] (0.010)	-0.165[***] (0.013)	-0.172[***] (0.011)	0.002 (0.009)
Private Sector: Services[d]	-0.063[***] (0.010)	-0.161[***] (0.012)	-0.067[***] (0.009)	-0.001 (0.008)
Union Member	0.024[***] (0.008)	0.097[***] (0.010)	0.025[**] (0.011)	0.038[***] (0.006)
Year = 1996[e]	-0.004 (0.010)	-0.020 (0.014)	-0.090[***] (0.015)	-0.028[***] (0.008)
Constant[f]	0.718[***] (0.236)	0.743[***] (0.276)	0.645[***] (0.245)	0.925[***] (0.231)

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
R^2	0.264	0.317	0.223	0.254
Number of Observations	12180	12180	12180	12180

Note: Standard errors in parentheses have been corrected for the complex survey design of both the National Medical Expenditure Survey and the Medical Expenditure Panel Survey.
[a]Calculated as average effect of being married across deciles and years.
[b]Decile effects are calculated relative to decile 1 and represent averages across marital status and years.
[c]Calculated as effect of working in multi-location firm averaged across all establishment size categories.
[d]Private industry includes manufacturing, construction, mining, forestry, and transportation. Private services includes sales and miscellaneous. Omitted category is public sector.
[e]Calculated as average year effect across deciles and marital status.
[f]Constant term includes the average state effect.
*** Indicates coefficient estimates significantly different from zero at the 1 percent level.
* *Indicates coefficient estimates significantly different from zero at the 5 percent level.
* Indicates coefficient estimates significantly different from zero at the 10 percent level.

Table 3: Worker-Level IV Linear Probability Models with Interaction Effects

	Eligible for Health Coverage at Current Main Job	Covered by Private Insurance
Tax Price Effect by Income Category (1996 US$)		
Income under $20,000	-1.196[**]	-1.591[***]
	(0.593)	(0.627)
	[-1.472]	*[-1.909]*
Income $20,000 to $40,000	-0.682[*]	-0.684[**]
	(0.357)	(0.335)
	[-0.526]	*[-0.501]*
Income over $40,000	-0.522	-0.539
	(0.376)	(0.348)
	[-0.331]	*[-0.321]*
F-test: Low versus Middle Income	0.94	2.47
F-test: Low versus High Income	1.24	3.12[*]
Tax Price Effect by Family Health Risk		
Highest Quintile in Risk Distribution	-0.714[**]	-0.566[***]
	(0.323)	(0.309)
	[-0.511]	*[-0.379]*
All Lower Risk Levels	-0.730[**]	-0.832[***]
	(0.331)	(0.312)
	[-0.564]	*[-0.610]*
F-test for Equality	0.01	4.99[**]

	Eligible for Health Coverage at Current Main Job	Covered by Private Insurance
Tax Price Effect by Employer Characteristics		
Single-Establishment Private Firms with 50 or Fewer Employees	-0.953** (0.362) *[-1.049]*	-1.170*** (0.346) *[-1.035]*
All Other Employers	-0.673* (0.326) *[-0.480]*	-0.714*** (0.309) *[-0.495]*
F-test for Equality	2.47	7.36***

*** Indicates coefficient estimates significantly different from zero at the 1 percent level.
* *Indicates coefficient estimates significantly different from zero at the 5 percent level.
* Indicates coefficient estimates significantly different from zero at the 10 percent level.

Table 4: Family-Level IV Linear Probability Models

	At Least One Family Member Eligible for Health Coverage at Current Main Job	All Family Members Covered by Private Insurance
Tax Price Effect (All Working Families) *(N=8597)*	-0.727** (0.333) *[-0.527]*	-1.076*** (0.354) *[-0.830]*
Tax Price Effect by Income Category (1996 US$)		
Income under $20,000	-1.249** (0.604) *[-1.414]*	-2.125*** (0.624) *[-2.788]*
Income $20,000 to $40,000	-0.682* (0.387) *[-0.500]*	-0.902** (0.433) *[-0.709]*
Income over $40,000	-0.592* (0.336) *[-0.368]*	-0.893** (0.383) *[-0.577]*
F-test: Low versus Middle Income	1.17	4.59**
F-test: Low versus High Income	1.39	4.33**
Tax Price Effect by Family Health Risk		
Highest Quintile in Risk Distribution	-0.609** (0.333) *[-0.410]*	-1.067*** (0.364) *[-0.781]*
All Lower Risk Levels	-0.743* (0.334) *[-0.551]*	-1.077*** (0.359) *[-0.844]*
F-test for Equality	1.25	0.00

	At Least One Family Member Eligible for Health Coverage at Current Main Job	All Family Members Covered by Private Insurance
Tax Price Effect by Employer Characteristics		
All Family Workers Employed in Single-Establishment Private Firms with 50 or Fewer Employees	-1.065*** (0.402) [-1.086]	-1.170*** (0.422) [-1.201]
At Least One Family Member Employed at Larger (or Multi-Establishment) Private Firm or in Public Sector	-0.669** (0.328) [-0.462]	-1.059*** (0.354) [-0.784]
F-test for Equality	3.47*	0.22
Tax Price Effect by Family Type		
Single-Person Families	-0.949** (0.387) [-0.744]	-1.029** (0.410) [-0.797]
Multi-Person Families with Children under 18	-0.399*** (0.278) [-0.285]	-1.152*** (0.297) [-0.943]
Multi-Person Families without Children under 18	-0.486*** (0.293) [-0.324]	-1.006*** (0.311) [-0.705]
F-test for Equality of Single-Person Families and Multi-Person Families with Children	4.96**	0.27
F-test for Equality of Single-Person Families and Multi-Person Families without Children	2.83*	0.01

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*** Indicates coefficient estimates significantly different from zero at the 1 percent level.

* *Indicates coefficient estimates significantly different from zero at the 5 percent level.

* Indicates coefficient estimates significantly different from zero at the 10 percent level.

Appendix A: Worker-Level OLS Linear Probability Models for Coverage and Employee Benefits

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Tax Price	-0.200***	0.001	0.014	-0.165**
	(0.065)	(0.075)	(0.071)	(0.076)
	[-0.153]	[0.001]	[0.011]	[-0.119]
High Family Health Risk	-0.006	0.005	0.000	0.008
	(0.009)	(0.012)	(0.010)	(0.007)
Age 26-35	0.061***	0.047***	0.020	0.027**
	(0.015)	(0.015)	(0.015)	(0.014)
Age 36-45	0.061***	0.061***	0.014	0.032**
	(0.016)	(0.016)	(0.016)	(0.014)
Age 46-55	0.086***	0.087***	0.033*	0.045***
	(0.014)	(0.015)	(0.017)	(0.014)
Age over 55	0.056***	0.048**	0.022	0.064***
	(0.018)	(0.020)	(0.021)	(0.015)
Male	-0.007	-0.002	-0.040***	-0.028***
	(0.007)	(0.009)	(0.008)	(0.006)
Black	-0.020*	0.013	0.014	-0.045***
	(0.011)	(0.014)	(0.012)	(0.010)
Hispanic	-0.071***	-0.035**	-0.020	-0.086***
	(0.014)	(0.015)	(0.015)	(0.013)
Education: 12 Years	0.064***	0.079***	0.090***	0.060***
	(0.013)	(0.013)	(0.015)	(0.011)
Education: 13-16 Years	0.084***	0.106***	0.163***	0.085***
	(0.013)	(0.013)	(0.014)	(0.012)

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Education: over 16 Years	0.105*** (0.014)	0.172*** (0.016)	0.186*** (0.017)	0.087*** (0.014)
Married[a]	0.036*** (0.009)	0.058*** (0.011)	0.042*** (0.010)	0.080*** (0.008)
Has Dependent Children	-0.001 (0.004)	-0.003 (0.004)	-0.003 (0.004)	-0.010*** (0.004)
Home Owner	0.034*** (0.008)	0.044*** (0.011)	0.033*** (0.010)	0.050*** (0.008)
Resides in Metropolitan Statistical Area	-0.003 (0.009)	-0.023** (0.011)	0.011 (0.013)	0.011 (0.009)
Income Decile 2[b]	0.118*** (0.021)	0.049** (0.021)	0.077*** (0.025)	0.120*** (0.023)
Income Decile 3[b]	0.215*** (0.021)	0.117*** (0.023)	0.117*** (0.023)	0.224*** (0.021)
Income Decile 4[b]	0.248*** (0.023)	0.164*** (0.022)	0.171*** (0.024)	0.270*** (0.022)
Income Decile 5[b]	0.257*** (0.021)	0.191*** (0.022)	0.208*** (0.023)	0.292*** (0.022)
Income Decile 6[b]	0.262*** (0.022)	0.228*** (0.024)	0.222*** (0.023)	0.301*** (0.021)
Income Decile 7[b]	0.276*** (0.022)	0.230*** (0.024)	0.233*** (0.025)	0.297*** (0.023)
Income Decile 8[b]	0.270*** (0.023)	0.245*** (0.024)	0.249*** (0.025)	0.301*** (0.023)

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Income Decile 9[b]	0.242***	0.221***	0.217***	0.289***
	(0.023)	(0.026)	(0.025)	(0.024)
Income Decile 10[b]	0.250***	0.248***	0.226***	0.294***
	(0.022)	(0.026)	(0.027)	(0.024)
Single-Estab. Firm with 11 to 20 Emp.	0.202***	0.142***	0.083***	0.095***
	(0.029)	(0.027)	(0.029)	(0.023)
Single-Estab. Firm with 21 to 50 Emp.	0.339***	0.227***	0.144***	0.140***
	(0.022)	(0.023)	(0.026)	(0.018)
Single-Estab. Firm with 51 to 200 Emp.	0.372***	0.338***	0.195***	0.171***
	(0.023)	(0.021)	(0.024)	(0.019)
Single-Estab. Firm with over 200 Emp.	0.398***	0.510***	0.306***	0.204***
	(0.020)	(0.021)	(0.022)	(0.016)
Multi-Establishment Firm[c]	0.363***	0.409***	0.255***	0.158***
	(0.017)	(0.015)	(0.018)	(0.015)
Private Sector: Manufacturing[d]	-0.054***	-0.163***	-0.171***	0.003
	(0.010)	(0.013)	(0.011)	(0.009)
Private Sector: Services[d]	-0.064***	-0.161***	-0.067***	-0.001
	(0.010)	(0.012)	(0.009)	(0.008)
Union Member	0.026***	0.100***	0.026**	0.040***
	(0.008)	(0.010)	(0.011)	(0.006)
MSA	-0.003	-0.023**	0.011	0.011
	(0.009)	(0.011)	(0.013)	(0.009)
Year = 1996[e]	0.002*	-0.026	-0.088***	-0.020***
	(0.009)	(0.016)	(0.017)	(0.008)

Explanatory Variable	Offered and Eligible for Coverage at Current Main Job	Eligible for Retirement Plan at Current Main Job	Has Paid Sick Leave at Current Main Job	Covered by Private Insurance
Constant[f]	0.354***	0.222**	0.467***	0.464***
	(0.063)	(0.074)	(0.070)	(0.072)
R^2	0.271	0.325	0.225	0.268

Note: Standard errors in parentheses have been corrected for the complex survey design of both the National Medical Expenditure Survey and the Medical Expenditure Panel Survey.
[a]Calculated as average effect of being married across deciles and years.
[b]Decile effects are calculated relative to decile 1 and represent averages across marital status and years.
[c]Calculated as effect of working in multi-location firm averaged across all establishment size categories.
[d]Private industry includes manufacturing, construction, mining, forestry, and transportation. Private services includes sales and miscellaneous. Omitted category is public sector.
[e]Calculated as average year effect across deciles and marital status.
[f]Constant term includes the average state effect.
*** Indicates coefficient estimates significantly different from zero at the 1 percent level.
* *Indicates coefficient estimates significantly different from zero at the 5 percent level.
* Indicates coefficient estimates significantly different from zero at the 10 percent level.